NEBRASKA INFORMATION TECHNOLOGY COMMISSION
COMMUNITY TECHNOLOGY FUND
2001 GRANT APPLICATION

Project Title: "The Technologically Empowered Elected Official"

Name of Submitting Entity: Lower Platte North Natural Resources District

Project Contact Information:

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B. Certification for Request

I certify that to best of my knowledge the information in this application is correct and that the application has been authorized by this entity to meet the obligations set forth in this application.

Authorized Signature:

Typed Name: Tom Mountford

Title:**:** Assistant Manager

Name of Entity**:** Lower Platte North Natural Resources District

Date:**:** February 16, 2001

Total State Funds Requested: $25,000

Section II: Executive Summary

1. General Description of Lower Platte North NRD

The Lower Platte North Natural Resources District (LPNNRD) is one of 23 Natural Resources Districts created in 1969 with the passage of LB 1357 by the Nebraska Unicameral. Since its formation in 1972, the LPNNRD has been assisting people in the Lower Platte North River Basin in the development and protection of our soil and water resources. The Lower Platte North Natural Resources District (LPNNRD) is governed by an elected 19-member Board of Directors. The District comprises approximately one million acres of land which includes portions of seven counties. The District has a population of approximately 60,000.

2. General Description of Proposed Project

This project will propel the LPNNRD elected directors into a leadership role in promoting the use of technology to other city and county governments and rural constituents in the District. This will eventually empower all local governments and citizens in the District by giving access to vast quantities of invaluable natural resource information which will allow them to be more efficient and effective in solving natural resource-based problems and making decisions at the local level.

3. Geographical Area Served By This Project.

The Lower Platte North Natural Resources District is located in the Lower Platte River Basin in eastern Nebraska and includes 1,031,000 acres of land. Portions of Saunders, Butler, Platte, Dodge, Colfax, Boone and Madison Counties are within the District including twenty-eight cities, towns and villages. Besides the Platte River, other important tributaries in the District include Wahoo Creek, Skull Creek, Shell Creek, Elm Creek, Rawhide Creek, Sand Creek, Duck Creek, Bone Creek and the Bellwood tributaries. This effort will eventually extend beyond the Districts boundaries. The Lower Platte North NRD, Papio-Missouri River NRD, Lower Platte South NRD and Nemaha NRD entered into a cooperative agreement to build a Geographic Information System (GIS) to make maps and data available through the Internet to service much of eastern Nebraska. The Lower Platte North NRD is the lead agency in creation of this regional Internet Map Server System (IMS).

Section III: Goals and Objectives

1. Describe the project, including the specific goals and objectives.

Our primary goal is to expand the use of technological tools such as computers, Geographic Information Systems (GIS), and Global Positioning Systems (GPS) in Eastern Nebraska. The area of focus includes four Natural Resources Districts and numerous city and county governments and state and federal entities. Once accomplished, this technology will allow our governmental partners to communicate better and to work much more efficiently by sharing information between each other and the people they serve. These tools will be most useful to solve natural resource challenges and for planning future needs and solutions.

The Lower Platte North NRD is a proven leader in the use of Geographic Information Systems (GIS) locally, statewide and nationally. The LPNNRD has been an active member representing the State's 23 NRD's on the Nebraska GIS Steering Committee since 1993. GIS is an automated system that combines digital information with geo-referenced mapping overlays. A series of base maps has been created from the Nebraska Department of Natural Resources with coverages that include counties, townships, sections and major roads within the District. This has been expanded to include soil type information, Digital Orthophoto Quarter Quadrangles (DOQQ's) (Digital Air Photos) and digital elevation models. Several applications were performed once the district-wide base maps were completed. For example, a sandy soils map was generated to aid decisions concerning fall application of fertilizers under the District's Groundwater Management Plan requirements. An overlay of all wells registered with the

Department of Water Resources has been developed for checking spacing requirements when new wells are requested. In addition all water quality sites, water quantity sites, and registered chemigation sites are mapped with all pertinent data entered. We also map and input data on all constructed projects which include flood control dams, county dams and individual conservation projects since 1972.

To achieve our goal, highly developed technological tools will be placed in the hands of our 19-Member Board of elected officials, who reside throughout the District which will link them to the District Office. For this, we plan to purchase laptop computers and modems for our officials. This laptop technology will keep our officials better informed to make local resource decisions and allow them to use these outreach tools from our Wahoo Office. Between our monthly meetings, we will be able to send Directors pertinent information, data and maps on a timely basis. By using our digital camera, we will also be able to send photos of resource problems and concerns when Directors are working with their constituents between meetings. These photos will be linked to the GIS and information data bases. The LPNNRD will also facilitate and assist other local governments with implementation of these technologies.

As a secondary benefit, this project demonstrates how technology can efficiently and effectively reduce the vast quantity of written informational materials mailed and distributed to the 19-member Board. These mailings include board and committee agendas and minutes, project updates and summaries, various meeting and public hearing notices, legislative updates and bills. This will also provide directors with access to E-mail, which will reduce the need for telephone conversations and personal visits. This system will also cut down the time taken for role-call votes from the Board members, thus significantly reducing the length of meetings. By networking the computers together at the LPNNRD Board meetings, Directors will be able to cast votes with a simple stroke of the keyboard, with results shown through a projector instantaneously.

2. Describe the project's relationship to the entity's comprehensive technology plan.

As part of our technology plan, the LPNNRD has been developing a Geographic Information System (GIS) since 1993, that combines digital information with geo-referenced mapping overlays. As stated above, the District has made use of a series of base maps initially completed by the Nebraska Department of Natural Resources with coverages that include counties, townships, sections and major roads within the District. This has been expanded to include soil type information, Digital Orthophoto Quarter Quadrangles (DOQQ's) and ten-foot contour coverages. The District has expanded our applications to include district programs and detailed project information and coverages. Our plan including our elected Director's as a important link in educating others on the valuable uses of this system.

The LPNNRD is working in cooperation with the Papio Missouri River, the Lower Platte South and Nemaha NRD's in establishing an Arc IMS GIS system which will make huge amounts of data available to a major portion of eastern Nebraska. The Lower Platte North NRD will house and maintain this system. The effort described in this application will take an aggressive step, through the example of our elected officials, toward educating other entities and the general public on the use of these powerful tools.

3. Describe the project's objectives and how they support the goals of the NITC and the

priorities of the Community Council.

This project will propel the LPNNRD elected directors into a leadership role in the use and promotion of technology to other city and county governments and rural constituents within the District. This will eventually empower all local governments and citizens in the District by giving them access to vast quantities of invaluable natural resource information which will allow them to be more efficient and effective in solving natural resource based problems and making decisions at the local level. Although the primary focus will be within the LPNNRD, this expertise will reach beyond the LPNNRD's boundaries as other entities observe the progress and capabilities of the project.

Section IV: Scope and Objectives

1. Beneficiaries of this project and the need(s) being addressed.

Through the use and promotion of technological tools such as computers, the Geographic Information Systems (GIS), and Global Positioning Systems (GPS), cities, county governments, and citizens in a large portion of eastern Nebraska will greatly benefit. We strongly feel that once accomplished, this technology will allow our local government partners to communicate better and be more efficient in sharing vast quantities of information with each other and the people they serve.

2. Expected outcomes of the project.

By helping to empower local governments and citizens in the District with advanced technological tools, they will not only have a better understanding of technology, but will also be able to use it to distribute data to help solve natural resource challenges. Local governments will communicate more efficiently and effectively with themselves and others to better serve a large portion of Eastern Nebraska.

3. Measurement and assessment methods that will verify project outcomes.

To verify project outcome, District staff and elected officials will document the number of local governments and District citizens that become involved with sharing data and communicating with themselves and the public. We also plan to set up the system so that the number of user "hits" can be measured.

4. Significant constraints of the project.

An initial challenge may be the time needed for training the elected officials and assisting other governmental entities and their elected officials in the use of computers and GIS data.

5. Significant assumptions relating to the project.

An assumption is that local governments and the general public (especially in rural areas) can greatly benefit by using computers, and advanced technological tools such as GIS and GPS. This will most effectively and efficiently improve communication and outreach in solving natural resource challenges and concerns.

Section V: Project Justification:

1. Cost/benefit analysis and a life cycle cost analysis.

It is estimated that this $50,000 project effort will pay for itself over a four-year period though the way of greatly improved communications and improved access to shared data. The direct and indirect benefits over a 10-year period, will grow to at least three to four times more than this initial investment. The ongoing benefits however will be endless as local governments and the public at large become more educated in using powerful technological tools to better their environment. The project benefits will be in the form of using more efficient ways to transfer and use data that otherwise would not be used or would be duplicated instead of shared.

2. Impact the project will have on the customers, clients, and citizens, What services or processes will be changed or implemented, with respect to customer service, productivity, quality, or performance;

This effort over time, will have a tremendous impact on how local governments communicate and conduct business with other entities, customers, clients and citizens by improved methods of sharing information. As technologically empowered governments become better informed and have access to more information and technological tools, the public will eventually be able to assess a wide variety of valuable data and information from the GIS server. The public will be also able to communicate and plan natural resource needs with their elected officials at a level once never thought possible. Elected Directors will be able to bring up on the computer, their constituent's aerial photograph of their land backed with Natural Resource data. Customer service, productivity, and quality will be tremendously enhanced as the LPNNRD elected officials become a shining example of how technology will totally improve communication and provide access to vast quantities of natural resource information, which will result in outstanding service to the public.

3. Impact the new system will have on current problems and how it will impact the entity's policies, procedures, standards, staffing, costs, and funding;

This new system will increase the comfort level and reduce the fears that many elected officials have with using computers and the Internet, resulting in using advanced technology to more effectively and efficiently serve their constituents. At the same time it will increase awareness to local governments and the general public about the uses of the Internet for accessing valuable information to improve the quality of life.

4. Other solutions that were evaluated and why they were rejected. Include their strengths and weaknesses. Explain the implications of doing nothing and why this option is not acceptable;

To bring the District's elected officials into the technological/informational age, there are not really any viable alternate solutions, other then doing nothing. To move into the 21st century, our District feels this is a much needed step toward becoming a more effective and efficient governmental body. Not only will the District make these improvements within, we will guide our other local governmental partners along the same path. In suppling computers and advanced technological tools in the hands of the LPNNRD elected officials, the purchase of desktop

computers vs. laptops were evaluated. The laptops were the selected alternative because the mobility of the unit is needed to maximum the use of it as an outreach tool when working with other units of governments and working with constituents away from the home. Doing nothing is not an option because it would not allow the District to maximize the use of our highly-developed technology for the good of the public. As said many times, to stand still is to move backward. We see this move as the best way advanced technology can be used and distributed in our District. Without state assistance, the District will not be able to take this step into the future.

5. The project's compliance with any state or federal mandates. If yes, please specify the mandate being addressed.

Although this project does not directly serve state or federal mandates, it will be an outstanding outreach educational tool for LPNNRD elected officials.

Section VI: Implementation

Describe the implementation plan–from design through installation and ongoing support–for the project. The narrative should address the following:

1. Project sponsor and stakeholder acceptance analysis;

The project sponsor will be the Lower Platte North Natural Resources District.

2. Define the roles, responsibilities, and required experience of the project team;

Computer Consultant - Selection and installation of hardware and software follow through on communications. Support for system and users.

GIS Specialist - Gather and create GIS layers and data bases. Support for system users.

LPNNRD Staff - Provide support to system, educational outreach to elected officials,

LPNNRD Elected Officials - Provide outreach to individuals with natural resource

3. List the major milestones and deliverables for each milestone;

April 2001 - Purchase of required Computer equipment.

April, May 2001 - Configuring computers for data storage, data manipulation and communication.

April 2001 - July 2001 - Train LPNNRD elected officials on use of computers, communication, and use of technological tools.

August 2001 - On going - Staff and Directors promote and assist city and county government

LPNNRD Elected Officials use their expertise and knowledge to help city and county governments in their area move toward arming themselves with technology to advance use of Internet, E-mail, GIS, GPS, and other tools to serve the public more efficiently and effectively then ever before.

4. Training and staff development requirements and procedures;

The LPNNRD's computer specialist and GIS specialist will oversee the training of up to 15 staff and our 19 member Board of elected officials at several levels. Training staff on computers, use of e-mail, GIS mapping and data entry has been aggressively underway since 1997. Staff who are, or become proficient in the use of technological tools will be able to assist the Computer Specialist and GIS Specialist in training the 19 elected officials. The GIS Specialist will oversee training of Internet Map Server partners. This training will include staff, elected officials and the public.

5. Maintenance and ongoing support requirements, plans and provisions.

The LPNNRD currently employs a ½ time Computer Specialist and a full-time GIS Specialist. It will be necessary to continue to staff these positions in order to support this project.

Section VII: Technical Impact

Describe how the project enhances, changes or replaces present technology systems, or if new systems are being added. The narrative should address the following:

1. Describe the hardware, software, and communications requirements for the project. Describe the strength and weaknesses of the proposed solution;

Hardware needed for this project will be 19 laptop computers and necessary communications components. A major strength of the proposed solution is that the LPNNRD has already obtained and developed the required software, use of e-mail and the Internet, and has been developing and inputting data to the GIS system since 1997. A weakness is the time required to train our elected officials in the proficient use of our advanced technology, however we are prepared for this undertaking. A strength to accomplish this project is that our elected officials have a positive attitude in accomplishing this challenge and have budgeted funds in support of this effort.

2. Rationale for determining the selection and appropriateness of the proposed technology components compared to the needs of the users;

Pentium III laptop computers with 6 gig hard drives and 64 k of memory will be used. This technology will keep these machines usable for the foreseeable future. The LPNNRD officials will have the ability to communicate with each other, other governmental bodies and the public.

3. Issues pertaining to reliability, security and scalability (future needs for growth or adaptation);

The equipment used will be current technology with ability to grow and upgrade. The IMS technology is innovative for Natural Resource decision makers.

4. Appropriateness of the key technologies with respect to generally accepted industry standards.

The use of computers for communication and information and information dissemination is common technology. The IMS addition is using ESRI products which lead the industry and set today's standards. Use of Laptop's is the only viable solution for giving directors computer technology.

5. Compatibility with existing institutional and/or statewide infrastructure.

The Director's laptop computers will hub off the Districts current NT server. The IMS server is coming on line in March 2001.

Section VIII: Risk Assessment

Describe the possible barriers and risks with implementing the project. The Narrative should address the following:

1. Describe the risk assessment which has been performed on this project;

The project risks have been evaluated and project duties and responsibilities will be planned and assigned to avoid potential failures. The District will adjust to setbacks and implement immediate strategies to achieve project success. The greatest risk to the investment is new technology making this project obsolete.

2. List the identified risks, and relative importance of each;

Equipment becoming obsolete - use of current and best technology will keep project fresh for years to come**.**

IMS portion becoming obsolete - this is today's leading technology and is becoming the industry standard**.**

3. Identify strategies which have been developed to minimize risks;

The LPNNRD Directors and Staff have a strong commitment to make this project successful and keep technology as current as our budget can afford.

4. Impact if project is not completed as proposed.

If this project is not completed, the District will continue with our status-quo; snail-mail, use of paper maps (when & where available) and voice communication. Information to cooperating partners and constituents will continue at existing levels. The worst impact will be a lost opportunity to begin a dramatic change of how governments and constituents communicate and share natural resource-based information.

Section IX: Financial Analysis and Budget:

	CTF Grant Funding	Cash Match (5)	In-Kind Match (6)	Other Funding Sources (7)	Total
Personnel (1)			$10,000		
Contractual Services					
Design					
Programming and Testing					
Other (2)					
Capital Expenditures (3)					
Hardware Acquisition*	$25,000	$15,000			
Software Acquisition*					
Network Costs*					
Other					
Other Costs					
Tele-communications					
Supplies and Materials					
Other Operating (4)					
Travel					
TOTAL	$25,000	$15,000	$10,000		

* Hardware, software and network costs are combined together in one bid price.

Financial Narrative Notes:

1. Please include estimated number of hours or full-time equivalent (FTE) by position. Include separate totals for salary and fringe benefits. If it is necessary to itemize on a separate sheet, include only the subtotal in this table.

Computer Setup - 160 hours x $22 / hour = $3,520
Training - 300 hours x $22 / hour = $6,600

2. Please itemize other contractual expenses on separate sheet.

No planned contractual expenses.

3. Please itemize capital expenditures by categories (hardware, software, network, and other) on a separate sheet.

The needed specifications for 19 laptop computers are as follows:

Display	12.1 inch active matrix
RAM	64 mb
Hard Drive	6 gig
Operating System	Windows 2000
Modem	56 kb
Battery	Lithium Ion
Chip Set	Pentium III 600
Software	Microsoft office 2000
Network	Wireless Card

To include CD Rom, 3.5 inch Floppy, Serial Port, Parallel Port, 2 PCMIA Slots, 2 USB Ports

The following capital expenditure needed for the project:

19 Laptop Computers @ $2,105 = $39,995 total cost. (This bid price package includes hardware, software, network, and other.)

4. Please itemize other operating expenses on a separate sheet.
None.

5. Please indicate the source of any cash match.
The cash match will be entirely provided by the Lower Platte North Natural Resources District.

6. Please indicate the source of any in-kind match and how it will be documented.

The entire in-kind match for this project will be time provided from the LPNNRD staff, for system set-up, training, support and computer repair and trouble shooting. LPNNRD staff will document their time toward the project on a customized time sheet that will include dates

and amount of time worked, and activities that were performed. These time sheets will be reviewed and approved by management.

7. Please provide a breakdown of any other external funding sources. Sources of external funds may include grants form federal agencies or private foundations.

There are no external funding sources at this time.